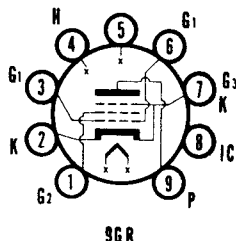


SYLVANIA TYPE 6DB5 12DB5

BEAM PENTODE AMPLIFIER



MECHANICAL DATA

Bulb	T-6 1/2
Base	E9-1, Miniature Button, 9-Pin
Outline	6-3
Basing	9GR
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6DB5	12DB5
Heater Voltage	6.3	12.6 Volts
Heater Current	1.200	0.600 Ampere
Heater Warm-up Time ¹		11 Seconds
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total D C and Peak		200 Volts Max.
Heater Positive with Respect to Cathode		
D C		100 Volts Max.
Total D C and Peak		200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	0.2 μ mf Max.
Input: g1 to (k+h+B.P.+g2)	13 μ mf
Output: p to (k+h+B.P.+g2)	8 μ mf

MAXIMUM RATINGS (Design Center Values—Except as Noted)²

Vertical Deflection Amplifier Service

D C Plate Voltage	300 Volts
Peak Positive Plate Voltage (Abs. Max.)	2000 ³ Volts
D C Grid No. 2 Voltage	150 Volts
Peak Negative Grid No. 1 Voltage	250 Volts
Plate Dissipation	10 Watts
Grid No. 2 Dissipation	1.25 Watts
Average Cathode Current	55 Ma
Peak Cathode Current	200 Ma
Grid No. 1 Circuit Resistance	
Fixed Bias	0.1 Megohm
Cathode Bias (Rk = 100 Ohms, Min.)	2.2 Megohms
Bulb Temperature (At Hottest Point)	250 Degrees C

TYPICAL OPERATION

AF Power Amplifier

	Triode Connected	Class A ₁ Amplifier
Plate Voltage	225	110
Grid No. 2 Voltage		110
Grid No. 1 Voltage	-30	-7.5
Cathode Bias Resistor		180 Ohms
Peak AF Grid No. 1 Voltage		7.5
Zero Signal Plate Current		49
Max. Signal Plate Current		50
Zero Signal Grid No. 2 Current		4
Max. Signal Grid No. 2 Current		10
Plate Resistance	1500	13,000
Transconductance	3800	8000
Load Resistance		2000
Power Output		2.1
Total Harmonic Distortion		10

NOTES:

- Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
- For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the pulse must not exceed 15% of one scanning cycle.
- Under no circumstances should this absolute value be exceeded.
- No Grid No. 1 Current should flow during any part of the input cycle.

APPLICATION

The Sylvania Types 6DB5 and 12DB5 are miniature, beam pentodes intended primarily for use as a vertical deflection amplifier or audio amplifier. The 12DB5 has controlled heater warm-up time for series string operation.